



# STIC Search Report

**EIC 1700**

STIC Database Tracking Number: 165867

**TO:** Eisa Elhilo  
**Location:** REM 9A60  
**Art Unit :** 1751  
**September 27, 2005**

**Case Serial Number:** 10/724083

**From:** Kathleen Fuller  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

## Search Notes

There were 2450 structures from the dialdehyde search but only 11 CA references when combined with the utility. Of these 11 references only 2 contained the index term amines/it. Since there were only 9 other references I just printed those out and did not do a structure search for the second component which could be any amine under the sun



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

➤ I am an examiner in Workgroup:  Example: 1713

➤ Relevant prior art **found**, search results used as follows:

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

Comments:

=> FILE REG

FILE 'REGISTRY!' ENTERED AT 16:34:52 ON 27 SEP 2005  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 26 SEP 2005 HIGHEST RN 863963-04-6  
DICTIONARY FILE UPDATES: 26 SEP 2005 HIGHEST RN 863963-04-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLU

FILE 'HCAPLU!' ENTERED AT 16:34:57 ON 27 SEP 2005  
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FILE COVERS 1907 - 27 Sep 2005 VOL 143 ISS 14  
FILE LAST UPDATED: 26 Sep 2005 (20050926/ED)

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This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE  
 L25 STR  
 $O \equiv CH \sim Hy \sim CH \equiv O$   
 1 2 3 4 5

2,450 structures from the query

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
 L27 SCR 1305  
 L29 SCR 2043  
 L31 2450 SEA FILE=REGISTRY SSS FUL L25 AND L27 NOT L29  
 L32 3260 SEA FILE=HCAPLUS ABB=ON L31  
 L34 11 SEA FILE=HCAPLUS ABB=ON L32 AND (HAIR OR KERAT?)  
 L35 2 SEA FILE=HCAPLUS ABB=ON L34 AND AMINE?/IT

11 CA references

2 CA references  
 with amine

=> D L35 1-2 BIB ABS INF HITSTR  
 'INF' IS NOT A VALID FORMAT FOR FILE 'HCAPLUS'

The following are valid formats:

ABS ----- GI and AB  
 ALL ----- BIB, AB, IND, RE  
 APPS ----- AI, PRAI  
 BIB ----- AN, plus Bibliographic Data and PI table (default)  
 CAN ----- List of CA abstract numbers without answer numbers  
 CBIB ----- AN, plus Compressed Bibliographic Data  
 DALL ----- ALL, delimited (end of each field identified)  
 DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
 SAM ----- CC, SX, TI, ST, IT  
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
 SCAN must be entered on the same line as the DISPLAY,  
 e.g., D SCAN or DISPLAY SCAN)  
 STD ----- BIB, IPC, and NCL  
 IABS ----- ABS, indented with text labels  
 IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
 OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels  
 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field  
 codes. For a list of the display field codes, enter HELP DFIELDS at  
 an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST;  
 TI,IND; TI,SO. You may specify the format fields in any order and the  
 information will be displayed in the same order as the format  
 specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,  
 FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC  
 to view a specified Accession Number.

ENTER DISPLAY FORMAT (BIB):END

=> D L35 1-2 BIB ABS IND HITSTR

L35 ANSWER 1 OF 2 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:450587 HCPLUS  
 DN 141:28203  
 TI Hair dyeing compositions comprising a heterocyclic dialdehyde  
       and a nitrogen compound  
 IN Plos, Gregory  
 PA L'oreal, Fr.  
 SO Fr. Demande, 21 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 1

*applicant*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2847809	A1	20040604	FR 2002-15058	20021129
	EP 1428504	A1	20040616	EP 2003-292898	20031121
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004182735	A2	20040702	JP 2003-402180	20031201
	US 2004154109	A1	20040812	US 2003-724083	20031201

PRAI FR 2002-15058  
 US 2002-432981P  
 US 2003-439981P  
 OS MARPAT 141:28203  
 AB Hair dye compns. contain a heterocyclic dialdehyde and at least  
       a nitrogen compound. Thus, a composition contained 2,3-thiophenedicarboxaldehyde  
       6x10-3 mole, ammonia 0.8, and water qs to 100 g.  
 IC ICM A61K007-13  
 CC 62-3 (Essential Oils and Cosmetics)  
 ST heterocyclic dialdehyde nitrogen compd hair dye

IT    Alcohols, biological studies  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (amino; hair dyeing compns. comprising heterocyclic  
           dialdehyde and)

IT    Amines, biological studies  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (aromatic; hair dyeing compns. comprising heterocyclic  
           dialdehyde and)

IT    Amines, biological studies  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (diamines, aromatic; hair dyeing compns. comprising heterocyclic  
           dialdehyde and)

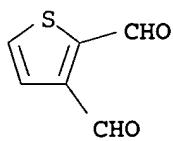
IT    Hair preparations  
       (dyes; hair dyeing compns. comprising heterocyclic dialdehyde  
       and)

IT    Dialdehydes  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (heterocyclic; hair dyeing compns. comprising heterocyclic  
           dialdehyde and)

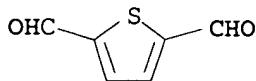
IT    78-96-6, Monoisopropanolamine 92-65-9, N,N-(Ethyl-β-hydroxyethyl)-p-  
       Phenylendiamine 93-05-0, N,N-Diethyl-p-Phenylendiamine 95-70-5,  
       p-Toluenediamine 99-98-9, N,N-Dimethyl-p-Phenylendiamine 101-54-2,  
       N-(Phenyl)-p-Phenylendiamine 102-71-6, Triethanolamine, biological  
       studies 106-50-3, p-Phenylendiamine, biological studies 106-50-3D,  
       p-Phenylendiamine, derivs. 141-43-5, Monoethanolamine, biological  
       studies 148-71-0, 4-Amino-N,N-Diethyl-3-methylaniline 537-65-5  
       615-66-7, 2-Chloro-p-Phenylendiamine 932-41-2,  
       2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-  
       Thiophenedicarboxaldehyde 1630-11-1, 2,6-Diethyl-p-Phenylendiamine  
       2359-52-6 2359-53-7 2632-65-7 5306-96-7, 2,3-Dimethyl-p-  
       Phenylendiamine 5431-44-7, 2,6-Pyridinedicarboxaldehyde  
       5862-80-6 6393-01-7, 2,5-Dimethyl-p-Phenylendiamine 7218-02-2,  
       2,6-Dimethyl-p-Phenylendiamine 7575-35-1, N,N-Bis(β-hydroxyethyl)-  
       p-Phenylendiamine 14791-78-7, 2-Fluoro-p-phenylendiamine 27138-37-0,  
       Pyridinedicarboxaldehyde 27138-37-0D, Pyridinedicarboxaldehyde, derivs.  
       37812-28-5, Furantetra carboxaldehyde 51952-99-9,  
       3,4-Dimethyl-2,5-Pyrroledicarboxaldehyde 56331-22-7 66566-48-1  
       73793-80-3, 2-Hydroxymethyl-p-phenylendiamine 80467-77-2 81752-41-2,  
       Furandicarboxaldehyde 81752-41-2D, Furandicarboxaldehyde, derivs.  
       93841-24-8, 2-β-Hydroxyethyl-p-phenylendiamine 97902-52-8,  
       2-Isopropyl-p-phenylendiamine 105293-89-8, N,N-Dipropyl-p-  
       Phenylendiamine 105607-68-9 126335-43-1, 2-β-Hydroxyethoxy-p-  
       Phenylendiamine 137818-67-8, Thiophenedicarboxaldehyde 137818-67-8D,  
       Thiophenedicarboxaldehyde, derivs. 207568-58-9 244104-61-8  
       503457-32-7 697753-72-3, 1H-Pyrroledicarboxaldehyde 697753-72-3D,  
       1H-Pyrroledicarboxaldehyde, derivs.  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (hair dyeing compns. comprising heterocyclic dialdehyde and)  
       932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6,  
       2,5-Thiophenedicarboxaldehyde 5431-44-7, 2,6-  
       Pyridinedicarboxaldehyde 37812-28-5, Furantetra carboxaldehyde  
       51952-99-9, 3,4-Dimethyl-2,5-Pyrroledicarboxaldehyde  
       RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
           (hair dyeing compns. comprising heterocyclic dialdehyde and)

RN    932-41-2 HCPLUS

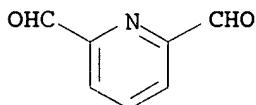
CN    2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



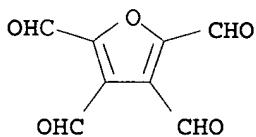
RN 932-95-6 HCAPLUS  
 CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



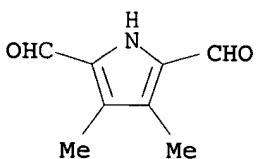
RN 5431-44-7 HCAPLUS  
 CN 2,6-Pyridinedicarboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 37812-28-5 HCAPLUS  
 CN Furantetraacarboxaldehyde (9CI) (CA INDEX NAME)



RN 51952-99-9 HCAPLUS  
 CN 1H-Pyrrole-2,5-dicarboxaldehyde, 3,4-dimethyl- (9CI) (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:833037 HCAPLUS  
 DN 135:376487  
 TI Temporary hair dyes containing enamines  
 IN Javet, Manuela; Mueller, Catherine  
 PA Wella Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN, CNT 1

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001085111	A1	20011115	WO 2001-EP102684	20010309
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10022743	A1	20011122	DE 2000-10022743	20000510
	AU 2001058268	A5	20011120	AU 2001-58268	20010309
	BR 2001006332	A	20020326	BR 2001-6332	20010309
	EP 1194118	A1	20020410	EP 2001-931507	20010309
	EP 1194118	B1	20040915		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003532661	T2	20031105	JP 2001-581766	20010309
	AT 275922	E	20041015	AT 2001-931507	20010309
	ES 2228857	T3	20050416	ES 2001-1931507	20010309
	US 2003101520	A1	20030605	US 2001-19204	20011220
	US 6740128	B2	20040525		
PRAI	DE 2000-10022743	A	20000510		
	WO 2001-EP2684	W	20010309		
OS	MARPAT 135:376487				
GI					



AB The invention relates to an agent for coloring fibers, especially hair, which is prepared before use by mixing an acidic component (A1), which contains at least one enamine of formula (I) or its acid addition salt (II), with an alkaline component (A2), which contains at least one carbonyl compound and at least one primary amine. The invention also relates to a method for temporarily coloring hair according to which the coloring obtained by using the coloring agent is removed at any time by means of a decolorizing agent that contains sulfite. Thus a hair dye cream that resulted intensive red color contained (g): as component A1 1,2,3,3-tetramethyl-3H-indolium hydrogen sulfate 3.13 ; as A2 4-hydroxy-3-methoxy-benzaldehyde 1.76 ; methanolamine to pH 9.6; 6-O-palmitoyl-L-ascorbic acid 0.3; cetylstearylalc. 12.0; laurylethersulfate (12% ag. solution) 10.0; ethanol 23.0; water to 100.

IC ICM A61K007-13

CC 62-2 (Essential Oils and Cosmetics)

ST hair dye temporary enamine  
 IT Hair preparations  
     (dyes; temporary hair dyes containing enamines)  
 IT Amines, biological studies  
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
     (Uses)  
     (primary; temporary hair dyes containing enamines)  
 IT Decolorizing agents  
 Temperature  
 pH  
     (temporary hair dyes containing enamines)  
 IT Carbonyl compounds (organic), biological studies  
 Enamines  
 Sulfites  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
     (Uses)  
     (temporary hair dyes containing enamines)  
 IT 58-27-5, 2-Methyl-1,4-naphthoquinone 74-79-3, L-Arginine, biological  
     studies 78-96-6, Isopropanolamine 86-51-1, 2,3-Dimethoxybenzaldehyde  
     90-02-8, 2-Hydroxybenzaldehyde, biological studies 93-02-7,  
     2,5-Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-03-3,  
     2-Thiophenecarboxaldehyde 99-61-6, 3-Nitrobenzaldehyde 100-10-7,  
     4-Dimethylaminobenzaldehyde 118-12-7, 1,3,3-Trimethyl-2-methylene-  
     indoline 120-14-9, 3,4-Dimethoxybenzaldehyde 121-32-4,  
     3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, 4-Hydroxy-3-methoxy-  
     benzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 134-96-3,  
     3,5-Dimethoxy-4-hydroxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde  
     148-53-8, 2-Hydroxy-3-methoxybenzaldehyde 156-87-6, 3-Amino-1-propanol  
     458-36-6, 4-Hydroxy-3-methoxycinnamaldehyde 487-70-7,  
     2,4,6-Trihydroxybenzaldehyde 487-89-8, Indole-3-carbaldehyde 498-62-4,  
     3-Thiophenecarboxaldehyde 552-89-6, 2-Nitrobenzaldehyde 555-16-8,  
     4-Nitrobenzaldehyde, biological studies 613-45-6, 2,4-  
     Dimethoxybenzaldehyde 619-66-9, 4-Carboxybenzaldehyde 620-02-0,  
     5-Methylfurfural 621-59-0, 3-Hydroxy-4-methoxybenzaldehyde 623-27-8,  
     Benzene-1,4-dicarb-aldehyde 643-79-8, 1,2-Benzenedicarboxaldehyde  
     932-41-2, 2,3-Thiophenedicarbox-aldehyde 932-95-6,  
     2,5-Thiophene-dicarboxaldehyde 1003-29-8, Pyrrol-2-aldehyde 1192-58-1  
     1194-98-5, 2,5-Dihydroxybenzaldehyde 1971-81-9, 4-Dimethylamino-1-  
     naphthaldehyde 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 2233-18-3,  
     3,5-Dimethyl-4-hydroxybenzaldehyde 3088-27-5, Methanolamine 4771-49-7,  
     6-Methylindole-3-carboxaldehyde 5392-12-1, 2-Methoxy-1-naphthaldehyde  
     6203-18-5, 4-Dimethylaminocinnamaldehyde 6872-05-5, 5-Amino-1,3,3-  
     trimethyl-2-methylene-indoline 6872-17-9, 5-Chloro-1,3,3-trimethyl-2-  
     methylene-indoline 7311-34-4, 3,5-Dimethoxybenzaldehyde 7570-45-8,  
     N-Ethylcarbazole-3-carboxaldehyde 7770-45-8, 4-Hydroxy-1-naphthaldehyde  
     10031-82-0, 4-Ethoxybenzaldehyde 13677-79-7, 3,4,5-  
     Trihydroxybenzaldehyde 15971-29-6, 4-Methoxy-1-naphthaldehyde  
     17422-74-1, Chromone-3-carboxaldehyde 17754-90-4, 4-Diethylamino-2-  
     hydroxybenzaldehyde 18278-34-7, 4-Hydroxy-2-methoxybenzaldehyde  
     25082-84-2 27344-28-1 27344-29-2 29865-90-5, 3,4-Dimethoxy-5-  
     hydroxybenzaldehyde 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methylene-  
     indoline 36429-28-4 39578-87-5, 1,3,3,5-Tetramethyl-2-methylene-  
     indoline 42059-81-4 68282-53-1, 4-Methyl-5-imidazole-carboxaldehyde  
     84562-48-1, 4-Dimethylamino-2-methoxybenzaldehyde 87345-53-7,  
     3,5-Dimethoxy-4-hydroxycinnamaldehyde 90134-10-4, 4-  
     Dibutylaminobenzaldehyde 100980-82-3 106001-58-5, 4-Diethylamino-3-  
     methoxybenzaldehyde 116209-27-9, 3-Methoxy-4-(1-  
     pyrrolidinyl)benzaldehyde 120420-70-4 126526-42-9 134822-76-7  
     151249-39-7 187030-52-0, 5-[4-(Diethylamino)phenyl]-2,4-pentadienal  
     189685-50-5 274696-30-9 344928-74-1 357397-32-1 357397-33-2

357397-34-3 357397-35-4 357397-36-5 357397-37-6 357397-39-8  
 357397-42-3 357397-44-5 357397-45-6 357397-46-7 373390-40-0  
 373390-41-1

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(temporary hair dyes containing enamines)

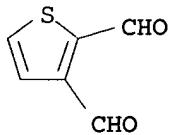
IT 932-41-2, 2,3-Thiophenedicarbox-aldehyde 932-95-6,  
 2,5-Thiophene-dicarboxaldehyde

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(temporary hair dyes containing enamines)

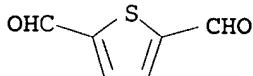
RN 932-41-2 HCPLUS

CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 932-95-6 HCPLUS

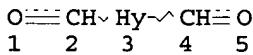
CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> => D QUE

L25 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L27 SCR 1305

L29 SCR 2043

L31 2450 SEA FILE=REGISTRY SSS FUL L25 AND L27 NOT L29

L32 3260 SEA FILE=HCPLUS ABB=ON L31

L34 11 SEA FILE=HCPLUS ABB=ON L32 AND (HAIR OR KERAT?)

L35 2 SEA FILE=HCPLUS ABB=ON L34 AND AMINE?/IT

L36 9 SEA FILE=HCPLUS ABB=ON L34 NOT L35

*Remaining 9 CA References*

=> D L36 BIB ABS IND HITSTR 1-

YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):Y

L36 ANSWER 1 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:492301 HCPLUS  
 DN 141:42550  
 TI Hair dyeing compositions containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound  
 IN Plos, Gregory  
 PA L'Oreal, Fr.  
 SO Fr. Demande, 27 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2848444	A1	20040618	FR 2002-15913	20021216
	FR 2848444	B1	20050128		
	EP 1430878	A1	20040623	EP 2003-293128	20031212
		R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	JP 2004196803	A2	20040715	JP 2003-417582	20031216
	US 2004205905	A1	20041021	US 2003-735748	20031216
PRAI	FR 2002-15913	A	20021216		
	US 2003-456180P	P	20030321		

OS MARPAT 141:42550

AB Hair dyeing compns. contain ortho- or  $\alpha$ -dialdehyde and one sulfur compound and can be used for the dyeing of human hair. Thus, composition contained o-phthalaldehyde 0.5, cysteamine-2HCl  $3 \times 10^{-3}$  mole%, and glycine  $10^{-3}$  mole%, NaOH qs, and water qs to 100 g.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dyeing dialdehyde sulfur compd

IT Surfactants

(amphoteric; hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Surfactants

(anionic; hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Alcohols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aralkyl; hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Surfactants

(cationic; hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Hair preparations

(dyes; hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Hair

Human

Surfactants

(hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and one sulfur compound)

IT Amino acids, biological studies

Cycloalkanols

Dialdehydes

Peptides, biological studies

Polyoxyalkylenes, biological studies

Proteins

## Thiols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and  
 one sulfur compound)

## IT Surfactants

(nonionic; hair dyeing compns. containing ortho- or  
 $\alpha$ -dialdehyde and one sulfur compound)

## IT Alcohols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (polyhydric; hair dyeing compns. containing ortho- or  
 $\alpha$ -dialdehyde and one sulfur compound)

## IT Surfactants

(zwitterionic; hair dyeing compns. containing ortho- or  
 $\alpha$ -dialdehyde and one sulfur compound)

IT 51-85-4, Cystamine 52-90-4, Cysteine, biological studies 56-40-6,  
 Glycine, biological studies 56-41-7, Alanine, biological studies  
 56-45-1, Serine, biological studies 56-81-5, Glycerin, biological  
 studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine,  
 biological studies 56-86-0, Glutamic acid, biological studies 56-87-1,  
 Lysine, biological studies 57-55-6, Propylene glycol, biological studies  
 60-18-4, Tyrosine, biological studies 60-23-1, Cysteamine 61-90-5,  
 Leucine, biological studies 63-68-3, Methionine, biological studies  
 63-91-2, Phenylalanine, biological studies 68-11-1, Thioglycolic acid,  
 biological studies 70-26-8, Ornithine 70-47-3, Asparagine, biological  
 studies 71-00-1, Histidine, biological studies 72-18-4, Valine,  
 biological studies 72-19-5, Threonine, biological studies 73-22-3,  
 Tryptophan, biological studies 73-32-5, Isoleucine, biological studies  
 74-79-3, Arginine, biological studies 75-08-1, Ethanethiol 100-51-6,  
 Benzyl alcohol, biological studies 107-41-5, Hexylene glycol 110-63-4,  
 Butylene glycol, biological studies 126-30-7, Neopentyl glycol  
 137-07-5, 2-Aminothiophenol 147-85-3, Proline, biological studies  
 643-79-8, o-Phthalaldehyde 932-41-2, 2,3-  
 Thiophenedicarboxaldehyde 1320-67-8, Propylene glycol monomethyl ether  
 7149-49-7, 2,3-Naphthalenedicarboxaldehyde 16904-32-8, Cysteamine  
 dihydrochloride 25322-68-3, Polyethylene glycol 34590-94-8,  
 DiPropylene glycol monomethyl ether 43073-12-7, 4,5-  
 DimethoxyPhthalaldehyde 70848-82-7, Naphthalenedicarboxaldehyde  
 74057-36-6, 1,2-Naphthalenedicarboxaldehyde 76197-35-8,  
 2,3-Anthracenedicarboxaldehyde 137818-67-8, Thiophenedicarboxaldehyde  
 358640-84-3, Anthracenedicarboxaldehyde

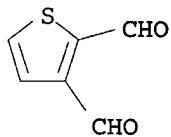
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and  
 one sulfur compound)

## IT 932-41-2, 2,3-Thiophenedicarboxaldehyde

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing ortho- or  $\alpha$ -dialdehyde and  
 one sulfur compound)

## RN 932-41-2 HCPLUS

## CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:875079 HCAPLUS

DN 139:354147

TI Use of  $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers

IN Plos, Gregory; Daubresse, Nicolas

PA L'Oreal, Fr.

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003090701	A1	20031106	WO 2003-EP5408	20030425
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2838961	A1	20031031	FR 2002-5186	20020425
	BR 2003004824	A	20041207	BR 2003-4824	20030425
	EP 1501471	A1	20050202	EP 2003-747128	20030425
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	FR 2002-5186	A	20020425		
	US 2002-382632P	P	20020524		
	WO 2003-EP5408	W	20030425		

OS MARPAT 139:354147

AB The invention relates to the use, for dyeing keratin fibers, of aromatic or non-aromatic carbocyclic, monocyclic or polycyclic  $\alpha$ -dialdehydes in the presence of at least one ammonium salt of a Broensted acid. A composition contained o-phthaldehyde 0.4, ammonium acetate 1.3, and distilled water to 100%.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye dialdehyde Broensted acid

IT Keratins

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)

IT Bronsted acids

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)

IT Dialdehydes

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)IT 643-79-8, 1,2-Benzenedicarboxaldehyde 932-41-2,  
Thiophene-2,3-dicarboxaldehyde 7149-49-7, Naphthalene-2,3-dicarboxaldehyde 43073-12-7, 1,2-Benzenedicarboxaldehyde, 4,5-dimethoxy-76197-35-8, Anthracene-2,3-dicarboxaldehyde  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)

IT 1066-33-7, Ammonium bicarbonate 7783-20-2, Ammonium sulfate, biological studies 10124-31-9, Ammonium phosphate

RL: COS (Cosmetic use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)

( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)

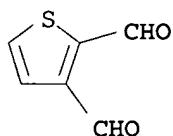
IT 932-41-2, Thiophene-2,3-dicarboxaldehyde

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

( $\alpha$ -dialdehydes in the presence of an ammonium salt of a Broensted acid for dyeing keratin fibers)

RN 932-41-2 HCAPLUS

CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:859396 HCAPLUS

DN 139:341433

TI  $\alpha$ -Dialdehydes and a Bronsted-acid ammonium salt for the dyeing of hair fibers

IN Plos, Gregory; Daubresse, Nicolas

PA L'Oreal, Fr.

SO Fr. Demande, 25 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2838961	A1	20031031	FR 2002-5186	20020425
	WO 2003090701	A1	20031106	WO 2003-EP5408	20030425
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	BR 2003004824	A	20041207	BR 2003-4824	20030425
	EP 1501471	A1	20050202	EP 2003-747128	20030425
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	FR 2002-5186	A	20020425		
	US 2002-382632P	P	20020524		
	WO 2003-EP5408	W	20030425		
OS	MARPAT 139:341433				

AB Hair dye compns. comprise  $\alpha$ -dialdehydes and at least an ammonium salt of a Bronsted acid. Thus, a composition contained o-phthalaldehyde 0.4, NH<sub>4</sub>OAc 1.3, and water qs to 100%.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST dialdehyde ammonium salt Bronsted acid hair dye

IT Carboxylic acids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(ammonium salts;  $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT Surfactants  
(anionic;  $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT Dialdehydes  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(aromatic;  $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT Hair preparations  
(dyes;  $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT Sulfonic acids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(salts;  $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

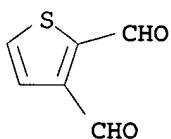
IT Bronsted acids  
Dialdehydes  
Phosphates, biological studies  
Sulfates, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT 631-61-8, Ammonium acetate 643-79-8, o-Phthalaldehyde 643-79-8D, o-Phthalaldehyde, derivs. 932-41-2, 2,3-Thiophenedicarboxaldehyde 1066-33-7, Ammonium hydrogen carbonate 7149-49-7, 2,3-Naphthalenedicarboxaldehyde 7783-20-2, Ammonium sulfate, biological studies 10124-31-9, Ammonium phosphate 43073-12-7 76197-35-8, Anthracene-2,3-dialdehyde  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

IT 932-41-2, 2,3-Thiophenedicarboxaldehyde  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ -dialdehydes and Bronsted-acid ammonium salts for dyeing of hair fibers)

RN 932-41-2 HCPLUS

CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 4 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:470262 HCPLUS

DN 139:41428  
 TI Melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin  
 IN Berens, Werner; Smuda, Christoph; Wolber, Rainer; Staeb, Franz; Blatt, Thomas; Giesen, Kyra  
 PA Beiersdorf AG, Germany  
 SO Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1319392	A2	20030618	EP 2002-26708	20021130
	EP 1319392	A3	20030827	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK	
	DE 10160966	A1	20030626	DE 2001-10160966	20011212

PRAI DE 2001-10160966 A 20011212  
 AB The invention concerns hair dyes and other hair preps. that contain advanced glycosylation end products (AGES), their precursors and/or lipofuscins for the promoting the formation and accumulation of melanin. Thus a pearly shampoo contained (weight/weight%): polyquaternium-10 0.50; sodium laureth sulfate 9.00; cocoamidopropyl betaine 2.50; perly substance 2.00; A2E 0.1; disodium EDTA 0.10; preservative, perfume, thickening agent, emulsifier, solns. to set pH 6 q.s.; water to 100.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST melanin hair dye prepn advanced glycosylation end product  
lipofuscin

IT Glycoproteins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(AGE (advanced glycosylation end product); melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT Hair preparations

(conditioners; melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT Hair preparations

(dyes; melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT Hair preparations

Shampoos  
(melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT Melanins

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT Lipofuscins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

IT 61354-90-3 61354-90-3D, N-substituted derivs.

67350-50-9D, N-substituted protein, peptide or C1-C35 alkyl derivs.

91037-91-1D, N-substituted protein, peptide or C1-C35 alkyl derivs.

124505-87-9, Pentosidine 173449-96-2, A2E 401574-77-4D, N-substituted protein, peptide or C1-C35 alkyl derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(melanin-forming hair dyes containing advanced glycosylation end

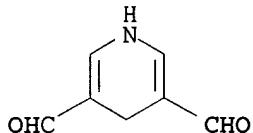
products and/or lipofuscin)

IT 61354-90-3 61354-90-3D, N-substituted derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(melanin-forming hair dyes containing advanced glycosylation end products and/or lipofuscin)

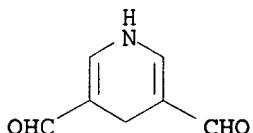
RN 61354-90-3 HCPLUS

CN 3,5-Pyridinedicarboxaldehyde, 1,4-dihydro- (9CI) (CA INDEX NAME)



RN 61354-90-3 HCPLUS

CN 3,5-Pyridinedicarboxaldehyde, 1,4-dihydro- (9CI) (CA INDEX NAME)



L36 ANSWER 5 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2003:5740 HCPLUS

DN 138:78134

TI Direct hair dyes composed of 1-benzopyrane-derivatives and an electrophilic substance

IN Sauter, Guido; Braun, Hans-Juergen; Brouillard, Raymond; Fougerousse, Andre; Roehri-Stoeckel, Christine

PA Wella Aktiengesellschaft, Germany

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003000214	A1	20030103	WO 2002-EP1194	20020206
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10130144	A1	20030102	DE 2001-10130144	20010622
	BR 2002005662	A	20030715	BR 2002-5662	20020206
	EP 1404289	A1	20040407	EP 2002-714147	20020206
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004521144	T2	20040715	JP 2003-506861	20020206

US 2003196281	A1	20031023	US 2003-380896	20030320
PRAI DE 2001-10130144	A	20010622		
WO 2002-EP1194	W	20020206		

OS MARPAT 138:78134

AB The invention concerns a two component hair dye where the components are mixed in the presence of acids or bases if required to form a direct dye that can be removed with sulfite-containing reducing agents if required. The first component includes 1-benzopyrane-derivs.; the second component contains an electrophilic substance that is selected from the group of carbonyls, imines and 1-alkyl-quinoline derivs. Thus a first components was composed of (g): 7-hydroxy-4-methyl-2-phenyl-1-benzylpyrylium chloride 3.14; cetylstearyl alc. 12.0; Brij 78 P 2.8; ethanol 24.8; water to 100. The second component was a mixture of (g): 4-hydroxy-3-methoxy-benzaldehyde 1.75; cetylstearyl alc. 12.0; Brij 78 P 2.8; ethanol 24.8; water to 100.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye benzopyrane deriv electrophilic substance

IT Electrophiles

Reducing agents

pH

(direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)

IT Carbonyl compounds (organic), biological studies

Imines

Sulfites

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)IT Dyes  
(direct; direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)IT Hair preparations  
(dyes; direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)IT Enzymes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(oxidizing, for in-situ carbonyl production; direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)

IT 91-22-5, Quinoline, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(1-alkyl-derivs.; direct hair dyes composed of 1-benzopyrane-derivs. and an electrophilic substance)IT 58-27-5, 2-Methyl-1,4-naphthoquinone 86-51-1, 2,3-Dimethoxybenzaldehyde  
90-02-8, 2-Hydroxybenzaldehyde, biological studies 93-02-7,  
2,5-Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-03-3,  
2-Thiophenecarboxaldehyde 99-61-6, 3-Nitrobenzaldehyde 100-10-7,  
4-Dimethylaminobenzaldehyde 120-14-9, 3,4-Dimethoxybenzaldehyde  
121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, 4-Hydroxy-3-methoxybenzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 134-96-3,  
3,5-Dimethoxy-4-hydroxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 148-53-8, 2-Hydroxy-3-methoxybenzaldehyde 254-04-6D, 2H-1-Benzopyran, derivs. 458-36-6 487-70-7, 2,4,6-Trihydroxybenzaldehyde 487-89-8, Indole-3-carbaldehyde 498-62-4, Thiophen-3-aldehyde 552-89-6, 2-Nitrobenzaldehyde 555-16-8, 4-Nitrobenzaldehyde, biological studies 613-45-6, 2,4-Dimethoxybenzaldehyde 619-66-9, 4-Carboxybenzaldehyde 620-02-0, 5-Methylfurfural 621-59-0, 3-Hydroxy-4-methoxybenzaldehyde 623-27-8, Benzene-1,4-dicarbaldehyde 643-79-8, 1,2-Phthalaldehyde 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-Thiophenedicarboxaldehyde 1003-29-8, Pyrrol-2-aldehyde 1192-58-1,

N-Methylpyrrol-2-aldehyde 1194-98-5, 2,5-Dihydroxybenzaldehyde  
 1952-37-0, 4-[[[(2-Hydroxyethyl)imino]methyl]phenol 1952-38-1,  
 2-[[[(2-Hydroxyethyl)imino]methyl]phenol 1971-81-9, 4-Dimethylamino-1-  
 naphthaldehyde 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 2233-18-3,  
 3,5-Dimethyl-4-hydroxybenzaldehyde 4771-49-7, 6-Methylindole-3-  
 carboxaldehyde 5392-12-1, 2-Methoxy-1-naphthaldehyde 6203-18-5,  
 4-Dimethylaminozimtaldehyde 6625-79-2 7311-34-4, 3,5-  
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 4-Hydroxy-1-naphthaldehyde 10031-82-0, 4-Ethoxybenzaldehyde  
 13677-79-7, 3,4,5-Trihydroxybenzaldehyde 15941-84-1 15971-29-6,  
 4-Methoxy-1-naphthaldehyde 16560-44-4 16843-24-6, 2-Chloro-1-  
 methylquinolinium-tetrafluoroborate 17065-03-1, 4-[[[(2-  
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 17754-90-4, 4-Diethylamino-2-hydroxybenzaldehyde 18095-64-2D, salts  
 18278-34-7, 4-Hydroxy-2-methoxybenzaldehyde 20921-29-3 26091-47-4  
 27976-81-4, N,N-Dimethyl-4-[[[(2-hydroxyethyl)imino]methyl]aniline  
 29865-90-5, 3,4-Dimethoxy-5-hydroxybenzaldehyde 42059-81-4  
 45994-10-3D, salts 45998-43-4D, salts 46878-55-1D, salts  
 50440-51-2D, salts 64073-92-3, 2,6-Dimethoxy-4-[[[(2-  
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 116209-27-9, 3-Methoxy-4-(1-pyrrolidinyl)benzaldehyde 117125-17-4D,  
 4-Chloro-1-ethylquinoline, salts 119658-57-0 125187-46-4 134822-76-7  
 187030-52-0, 5-[4-(Diethylamino)phenyl]-2,4-pentadienal 198829-37-7D,  
 salts 198829-39-9D, salts 198829-40-2 373390-26-2,  
 5-[[[(2-Hydroxyethyl)imino]methyl]-2-methoxyphenol 373390-27-3,  
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 2,6-Dimethoxy-4-[[[(2,3-dihydroxypropyl)imino]methyl]phenol 373390-34-2  
 373390-35-3 373390-36-4, 4-[[[(2-Hydroxy-2-phenylethyl)imino]methyl]phenol  
 373390-38-6 373390-42-2 373390-43-3 373390-44-4 373390-47-7,  
 1,2,3-Trihydroxy-4-[[[(2-hydroxyethyl)imino]methyl]benzene 373390-48-8  
 384340-47-0 473437-36-4, 2,6-Dimethoxy-4-[[[(1-phenyl-2-  
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 479541-82-7 479541-83-8 479541-84-9 479541-85-0 479541-86-1  
 479541-87-2 479541-88-3 479541-89-4 479541-90-7 479541-91-8  
 479541-92-9 479541-93-0 479541-94-1 479541-95-2 479541-96-3  
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 479542-11-5D, salts 479542-12-6D, salts 479542-13-7D, salts  
 479542-14-8D, salts 479542-15-9 479542-16-0 479542-17-1  
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 479542-24-0 479542-25-1 479542-26-2 479542-27-3 479542-28-4

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (direct hair dyes composed of 1-benzopyrane-derivs. and an  
 electrophilic substance)

IT 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6,

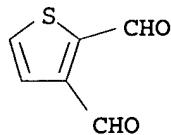
2,5-Thiophenedicarboxaldehyde

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (direct hair dyes composed of 1-benzopyrane-derivs. and an

electrophilic substance)

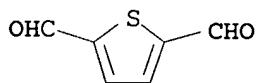
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CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 932-95-6 HCPLUS

CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 6 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2002:811804 HCPLUS

DN 137:325330

TI Preparation of 5-aryl-1,3,3-trimethyl-2-methylen-indoles and their iminium salts for the temporary dyeing of hair fibers

IN Sauter, Guido; Braun, Hans-Juergen; Reichlin, Nadia

PA Wella A.-G., Germany

SO Ger. Offen., 40 pp.

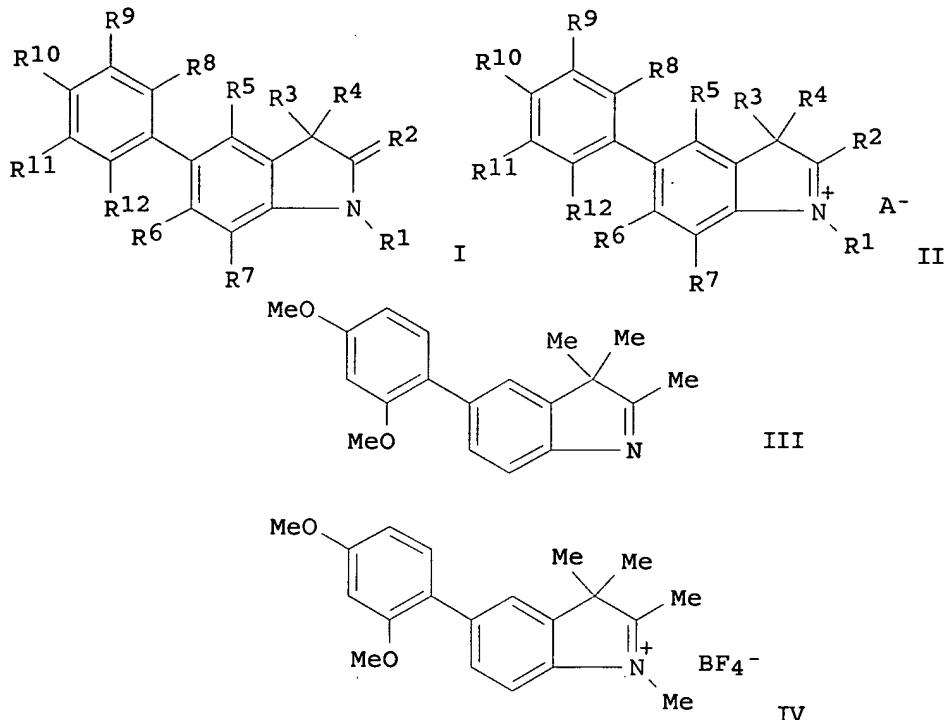
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10119204	A1	20021024	DE 2001-10119204	20010419
	WO 2002085854	A1	20021031	WO 2002-EP706	20020124
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1280773	A1	20030205	EP 2002-727315	20020124
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2002005040	A	20030429	BR 2002-5040	20020124
	JP 2004519521	T2	20040702	JP 2002-583381	20020124
	US 2003213071	A1	20031120	US 2002-297369	20021204
PRAI	DE 2001-10119204	A	20010419		
	WO 2002-EP706	W	20020124		
OS	CASREACT 137:325330; MARPAT 137:325330				
GI					



AB Title compds. I and II [R1 = alkyl, hydroxyalkyl, polyhydroxyalkyl, etc.; R2 = CHR; R = H, alkyl; R3, R4 = alkyl,  $(CH_2)_nRc$ ,  $(CH_2)_nCORc$ , etc.; n = 1-3; Rc = H, (un)substituted aromatic carbocycle, aromatic heterocycle, etc.; R5-R12 = H, alkyl, hydroxyalkyl, etc.; A- = anion of inorg. or organic acid] were prepared. The invention relates to hair dye kits containing 2-component hair dye compns. (A1 and A2) and a sulfite reductive decolorizing agent. Component A2 comprises of at least 1 carbonyl compd. and component A1 comprises of at least one indoline I or one 3H-indolium II deriv. For example, methylation indole of III, e.g., prep'd. from 5-bromo-2,3,3-trimethyl-3H-indole and 2,4-dimethoxyphenylboronic acid, with trimethyloxonium tetrafluoroborate afforded indolium IV in 55% yield. In coloration studies of bleached hair, 7-examples of compds. II (A1) in combination with 4-carbonyl compds. (A2) resulted in a range of hair coloring, e.g., a prepn. of indolium IV and 4-hydroxy-3-methoxybenzaldehyde produced a red color and white after reductive decolorization.

IC ICM C07D209-08

ICS C07D209-54; C07D405-04; C07F005-04; C09B007-00; D06P005-06

## CC 27-11 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 62

ST indolium prep<sup>n</sup> hair dye carbonyl bleaching sulfite  
decolorization; indole prep<sup>n</sup> hair dye carbonyl bleaching sulfite  
decolorization

## IT Sulfites

RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
(decolorizing agent; preparation of methyleneindoles and their iminium salts)

for the temporary dyeing of hair fibers)

IT Hair preparations

(dyes; preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

IT Decolorizing agents

Human

(preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

IT 58-27-5, 2-Methyl-1,4-naphthodione 86-51-1, 2,3-Dimethoxybenzaldehyde

90-02-8, 2-Hydroxybenzaldehyde, reactions 93-02-7, 2,5-

Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-03-3,

2-Thiophenecarboxaldehyde 99-61-6, 3-Nitrobenzaldehyde 100-10-7,

4-Dimethylaminobenzaldehyde 120-14-9, 3,4-Dimethoxybenzaldehyde

121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, 4-Hydroxy-3-

methoxybenzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 134-96-3,

3,5-Dimethoxy-4-hydroxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde

148-53-8, 2-Hydroxy-3-methoxybenzaldehyde 458-36-6, 4-Hydroxy-3-

methoxyimtaldehyde 487-70-7, 2,4,6-Trihydroxybenzaldehyde 487-89-8,

1H-Indole-3-carboxaldehyde 498-62-4, Thiophen-3-aldehyde 552-89-6,

2-Nitrobenzaldehyde 555-16-8, 4-Nitrobenzaldehyde, reactions 613-45-6,

2,4-Dimethoxybenzaldehyde 619-66-9, 4-Carboxybenzaldehyde 620-02-0,

5-Methylfurfural 621-59-0, 3-Hydroxy-4-methoxybenzaldehyde 623-27-8,

Benzene-1,4-dicarbaldehyde 643-79-8, 1,2-Phthalaldehyde 932-41-2

, 2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-

Thiophenedicarboxaldehyde 1003-29-8, Pyrrol-2-aldehyde 1192-58-1,

N-Methylpyrrol-2-aldehyde 1194-98-5, 2,5-Dihydroxybenzaldehyde

1952-37-0, 4-[(2-Hydroxyethyl)imino]methylphenol 1952-38-1,

2-[(2-Hydroxyethyl)imino]methyl phenol 1971-81-9, 4-Dimethylamino-1-

naphthaldehyde 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 2233-18-3,

3,5-Dimethyl-4-hydroxybenzaldehyde 4771-49-7, 6-Methylindol-3-

carboxaldehyde 5392-12-1, 2-Methoxy-1-naphthaldehyde 6203-18-5,

4-Dimethylaminozimtaldehyde 7311-34-4, 3,5-Dimethoxybenzaldehyde

7570-45-8, N-Ethylcarbazol-3-aldehyde 7770-45-8, 4-Hydroxy-1-

naphthaldehyde 10031-82-0, 4-Ethoxybenzaldehyde 13677-79-7,

3,4,5-Trihydroxybenzaldehyde 15971-29-6, 4-Methoxy-1-naphthaldehyde

17065-03-1, 4-[(2-Hydroxyphenyl)imino]methylphenol 17422-74-1,

Chromon-3-carboxaldehyde 17754-90-4, 4-Diethylamino-2-

hydroxybenzaldehyde 18278-34-7, 4-Hydroxy-2-methoxybenzaldehyde

27976-81-4, N,N-Dimethyl-4-[(2-hydroxyethyl)imino]methylaniline

29865-90-5, 3,4-Dimethoxy-5-hydroxybenzaldehyde 42059-81-4 64073-92-3,

2,6-Dimethoxy-4-[(2-hydroxyphenyl)imino]methyl phenol 68282-53-1,

4-Methylimidazol-5-carboxaldehyde 69155-75-5, 6-Hydroxychromon-3-

carboxaldehyde 70365-18-3, 4-[(2-Hydroxyethyl)imino]methyl-2-

methoxyphenol 84562-48-1, 4-Dimethylamino-2-methoxybenzaldehyde

87345-53-7, 3,5-Dimethoxy-4-hydroxyzimtaldehyde 90134-10-4,

4-Dibutylaminobenzaldehyde 100980-82-3 106001-58-5,

4-Diethylamino-3-methoxybenzaldehyde 116209-27-9, 3-Methoxy-4-(1-

pyrrolidinyl)benzaldehyde 187030-52-0, 5-[4-(Diethylamino)phenyl]-2,4-

pentadienal 373390-26-2, 5-[(2-Hydroxyethyl)imino]methyl-2-

methoxyphenol 373390-27-3, 2,6-Dimethoxy-4-[(2-

hydroxyethyl)imino]methyl phenol 373390-28-4, 1,2-Dihydroxy-4-[(2-

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Hydroxybenzylidene)aminolpropan-1,3-diol 373390-35-3,

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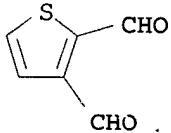
373390-38-6 373390-39-7, 2-[(4-Dimethylaminonaphthalen-1-ylmethylene)amino]ethanol 373390-42-2 373390-43-3, 2-[(4-Hydroxy-3,5-dimethoxybenzylidene)amino]-3-(imidazol-4-yl)propanoic acid 373390-44-4, 2-[(4-Hydroxybenzylidene)amino]-3-(imidazol-4-yl)propanoic acid 373390-46-6, 2-[(4-Hydroxybenzylidene)amino]-3-(indol-3-yl)propanoic acid 373390-47-7, 1,2,3-Trihydroxy-4-[[[(2-hydroxyethyl)imino]methyl]benzene 373390-48-8, 1,2,3-Trihydroxy-4-[[[(2-hydroxyethyl)imino]methyl]benzene 473437-36-4, 2,6-Dimethoxy-4-[[[(1-phenyl-2-hydroxyethyl)imino]methyl]phenol 473437-41-1, 2-[(4-Hydroxy-3,5-dimethoxybenzylidene)amino]-3-(indol-3-yl)propanoic acid 473437-43-3, 1,2,3-Trihydroxy-5-[[[(2-hydroxyethyl)imino]methyl]benzene  
 RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

IT 98-80-6, Benzeneboronic acid 106-38-7, 4-Bromotoluene 420-37-1, Trimethyloxoniumtetrafluoroborate 1423-27-4, 2- Trifluoromethylphenylboronic acid 6165-69-1, 3-Thiophenboronic acid 13922-41-3, Naphthalene-1-boronic acid 54136-24-2, 5-Bromo-2,3,3-trimethyl-3H-indole 73183-34-3 94839-07-3, 3,4- Methyleneedioxyphenylboronic acid 133730-34-4, 2,4-Dimethoxyphenylboronic acid 201733-56-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

IT 59876-87-8P 294655-87-1P, 5-Phenyl-2,3,3-trimethyl-3H-indole 473436-97-4P 473436-98-5P 473436-99-6P 473437-00-2P 473437-02-4P 473437-03-5P 473437-04-6P 473437-05-7P 473437-06-8P 473437-07-9P 473437-08-0P 473437-09-1P 473437-10-4P 473437-11-5P 473437-12-6P 473437-13-7P 473437-14-8P 473437-15-9P 473437-17-1P 473437-18-2P, 5-(2,4-Dimethoxyphenyl)-2,3,3-trimethyl-3H-indole 473437-20-6P 473437-21-7P, 5-(1,3-Benzodioxol-5-yl)-2,3,3-trimethyl-3H-indole 473437-23-9P 473437-24-0P, 5-[2-(Trifluoromethyl)phenyl]-2,3,3-trimethyl-3H-indole 473437-25-1P 473437-26-2P, 5-(Thiophen-3-yl)-2,3,3-trimethyl-3H-indole 473437-27-3P 473437-29-5P 473437-30-8P, 2,3,3-Trimethyl-5-p-tolyl-3H-indole 473437-32-0P 473437-33-1P, 2,3,3-Trimethyl-5-naphthalen-1-yl-3H-indole 473437-34-2P, 2,3,3-Trimethyl-5-(4,4,5,5-tetramethyl-[1,3,2]dioxaborolan-2-yl)-3H-indole 473437-35-3P, 5-(5,5-Dimethyl-[1,3,2]dioxaborinan-2-yl)-2,3,3-trimethyl-3H-indole  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (product; preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

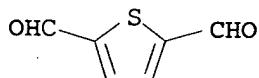
IT 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-Thiophenedicarboxaldehyde  
 RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (preparation of methyleneindoles and their iminium salts for the temporary dyeing of hair fibers)

RN 932-41-2 HCPLUS  
 CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 932-95-6 HCAPLUS

CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



L36 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:635862 HCAPLUS

DN 135:215740

TI Hair dye kits comprising indoline/indolium derivatives, carbonyl compounds and a decolorizing agent

IN Sauter, Guido; Braun, Hans-Juergen; Reichlin, Nadia

PA Wella Aktiengesellschaft, Germany

SO PCT Int. Appl., '81 pp.

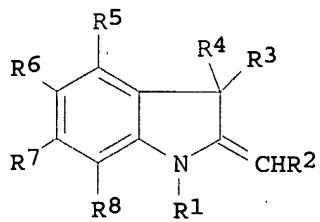
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DT Patent

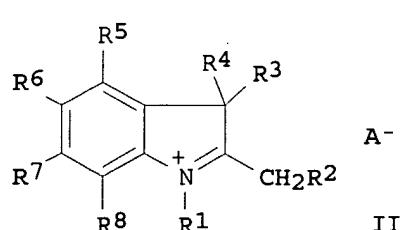
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001062219	A1	20010830	WO 2001-EP821	20010125
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	AU 2001028495	A5	20010903	AU 2001-28495	20010125
	BR 2001004590	A	20020108	BR 2001-4590	20010125
	EP 1227786	A1	20020807	EP 2001-949088	20010125
	EP 1227786	B1	20050824		
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	JP 2003523375	T2	20030805	JP 2001-561286	20010125
	US 2003079301	A1	20030501	US 2001-959112	20011017
	US 6652601	B2	20031125		
PRAI	DE 2000-10007948	A	20000222		
	WO 2001-EP821	W	20010125		
OS	MARPAT	135:215740			
GI					



I



II

AB The invention relates to hair dye kits containing 2-component hair-dye compns. (A1 and A2) and a reductive decolorizing agent; upon usage A1 and A2 are mixed. The component A2 comprises at least 1 carbonyl compound, and component A1 comprises at least 1 indoline derivative (I), or 1 3H-indolium derivative (II), R groups and A- are defined. Thus, the component A1 contained (g): 1,2,3,3,5-pentamethyl-3H-indolium iodide 0.30; lauryl ether sulfate (28% aqueous solution) 1, ethanol 2, water to 10%. The component A2 included (g): 3,5-dimethoxy-4-hydroxybenzaldehyde 0.17, lauryl ether sulfate (28% aqueous solution) 1, ethanol 2, water to 10%. By mixing 1 g of each component a pH of 8.1 was obtained. The dye was applied to bleached hair.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye indolium carbonyl bleaching sulfite; indoline carbonyl sulfite hair dye

IT Sulfites

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(decolorizing agent; hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT Hair preparations

(dyes; hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT Decolorizing agents

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT Carbonyl compounds (organic), biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 90-02-8, 2-Hydroxybenzaldehyde, biological studies 2233-18-3, 3,5-Dimethyl-4-hydroxybenzaldehyde 7770-45-8, 4-Hydroxy-1-naphthaldehyde 15971-29-6, 4-Methoxy-1-naphthaldehyde 18278-34-7, 4-Hydroxy-2-methoxybenzaldehyde 84562-48-1, 4-Dimethylamino-2-methoxybenzaldehyde

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(decolorizing agent; hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 58-27-5, 2-Methyl-1,4-naphthoquinone 86-51-1, 2,3-Dimethoxybenzaldehyde 93-02-7, 2,5-Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-03-3, 2-Thiophenecarboxaldehyde 99-61-6, 3-Nitrobenzaldehyde 100-10-7, 4-Dimethylaminobenzaldehyde 120-14-9, 3,4-Dimethoxybenzaldehyde 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, Vanillin 123-08-0, 4-Hydroxybenzaldehyde 134-96-3, 3,5-Dimethoxy-4-hydroxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 148-53-8, 2-Hydroxy-3-methoxybenzaldehyde 458-36-6 487-70-7, 2,4,6-Trihydroxybenzaldehyde 487-89-8, Indole-3-carbaldehyde 496-15-1D, Indoline, derivs. 498-62-4, 3-Thiophenecarboxaldehyde 552-89-6, 2-Nitrobenzaldehyde 555-16-8, 4-Nitrobenzaldehyde, biological studies 613-45-6, 2,4-Dimethoxybenzaldehyde 619-66-9, 4-Carboxybenzaldehyde 620-02-0, 5-Methylfurfural 621-59-0, Isovanillin 623-27-8, Benzene-1,4-dicarbaldehyde 643-79-8, o-Phthaldialdehyde 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-Thiophenedicarboxaldehyde 1003-29-8, Pyrrol-2-aldehyde 1192-58-1, N-Methylpyrrol-2-aldehyde 1194-98-5, 2,5-Dihydroxybenzaldehyde 1971-81-9, 4-Dimethylamino-1-naphthaldehyde 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 4771-49-7, 6-Methylindole-3-carboxaldehyde 5392-12-1, 2-Methoxy-1-naphthaldehyde 6203-18-5 6872-05-5,

5-Amino-1,3,3-trimethyl-2-methylene-indoline 7311-34-4,  
 3,5-Dimethoxybenzaldehyde 7570-45-8 7757-83-7, Sodium sulfite  
 10031-82-0, 4-Ethoxybenzaldehyde 10196-04-0, Ammonium sulfite  
 13677-79-7, 3,4,5-Trihydroxybenzaldehyde 17422-74-1,  
 Chromone-3-carboxaldehyde 17754-90-4, 4-Diethylamino-2-  
 hydroxybenzaldehyde 27344-28-1 29865-90-5, 3,4-Dimethoxy-5-  
 hydroxybenzaldehyde 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methylene-  
 indoline 36429-28-4 39578-87-5, 1,3,3,5-Tetramethyl-2-methylene-  
 indoline 41382-29-0 42059-81-4 54849-44-4 68282-53-1,  
 4-Methyl-5-imidazole-carboxaldehyde 87345-53-7 90134-10-4,  
 4-Dibutylamino-benzaldehyde 99567-90-5 100980-82-3 106001-58-5,  
 4-Diethylamino-3-methoxybenzaldehyde 116209-27-9, 3-Methoxy-4-(1-  
 pyrrolidinyl)benzaldehyde 120420-70-4 126526-42-9 134822-76-7  
 151249-39-7 187030-52-0, 5-[4-(Diethylamino)phenyl]-2,4-pentadienal  
 189685-50-5 357397-32-1 357397-33-2 357397-34-3 357397-35-4  
 357397-36-5 357397-37-6 357397-38-7 357397-39-8 357397-41-2  
 357397-42-3 357397-43-4 357397-44-5 357397-45-6 357397-46-7  
 357397-47-8 357397-48-9 357397-49-0

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 36429-14-8P

RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 74-88-4, Methyl iodide, reactions 118-12-7, 1,3,3-Trimethyl-2-methylene indoline 371-14-2, 4-Fluorophenylhydrazine 420-37-1, Trimethyloxonium tetrafluoroborate 539-44-6, p-Tolylhydrazine 563-80-4, Isopropylmethylketone 613-85-4, 2,5-Dimethylphenylhydrazine 615-00-9, 2,4-Dimethylphenylhydrazine 823-76-7, Cyclohexylmethylketone 3471-32-7, 4-Methoxyphenylhydrazine 63693-65-2, 4-Isopropylphenylhydrazine 84401-19-4, 2,3-Dimethylphenylhydrazine 357397-66-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 25981-82-2P 31241-19-7P 41797-88-0P 54136-23-1P 57019-81-5P

58060-98-3P 59223-23-3P 99385-54-3P 162258-84-6P 211692-73-8P

357397-51-4P 357397-53-6P 357397-54-7P 357397-56-9P 357397-57-0P

357397-59-2P 357397-60-5P 357397-61-6P 357397-62-7P 357397-63-8P

357397-65-0P 357397-68-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

IT 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6,

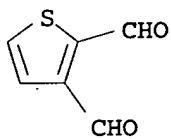
2,5-Thiophenedicarboxaldehyde

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

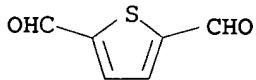
(hair dye kits comprising indoline/indolium derivs. and carbonyl compds. and decolorizing agent)

RN 932-41-2 HCPLUS

CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 932-95-6 HCPLUS  
 CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 8 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:401614 HCPLUS  
 DN 133:48681  
 TI Agent for coloring fibers  
 IN Kunz, Manuela; Mueller, Catherine; Oberson, Sylviane; Umbricht, Gisela;  
 Braun, Hans-Juergen; Goettel, Otto; Hayoz, Andre  
 PA Wella Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000033799	A1	20000615	WO 1999-EP9005	19991123
	W: BR, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19856342	A1	20000608	DE 1998-19856342	19981207
	DE 19933313	A1	20010118	DE 1999-19933313	19990716
	DE 19933313	C2	20030814		
	DE 19934283	A1	20010125	DE 1999-19934283	19990721
	BR 9907694	A	20001114	BR 1999-7694	19991123
	EP 1054657	A1	20001129	EP 1999-959302	19991123
	EP 1054657	B1	20040107		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002531479	T2	20020924	JP 2000-586293	19991123
	AT 257366	E	20040115	AT 1999-959302	19991123
PRAI	DE 1998-19856342	A	19981207		
	DE 1999-29908464	U	19990512		
	DE 1999-19933313	A	19990716		
	DE 1999-19934283	A	19990721		
	WO 1999-EP9005	W	19991123		
OS	MARPAT 133:48681				
AB	A direct dye for coloring hair and other fibers is obtained by mixing a component containing $\geq 1$ enamine $R_1R_2NCR_3:CH_2$ [ $R_1$ = (substituted) aryl, 5- or 6-membered heterocycle; $R_2$ = C1-8 alkyl, hydroxyalkyl, or alkoxyalkyl; $R_3$ = C1-8 alkyl, alkoxyalkyl, alkylene, or alkoxyalkylene, O, NH, NR4, S; $R_4$ = H, alkyl, alkoxyalkyl, hydroxyalkyl;				

or R1NCR3 = ring] with a component containing  $\geq 1$  carbonyl compound before use. A multiple-component kit for temporarily coloring and subsequently completely decoloring the hair, without damaging the hair, consists of colorant and a component containing a sulfite. Thus, an enamine component containing 1,3,3-trimethyl-2-methyleneindoline (stabilized with  $\alpha$ -tocopherol) 2.0, cetostearyl alc. 12.00, steareth-20 1.40, iso-PrOH 20.0, and demineralized H<sub>2</sub>O to 100.0 g was mixed 1:1 with an aldehyde component containing 4-hydroxy-3-methoxybenzaldehyde 1.76, cetostearyl alc. 3.06, SDS 0.34, lanolin alc. 0.50, and demineralized H<sub>2</sub>O to 100.00 g, and the product was applied to bleached hair for 30 min at 40° to dye the hair an intense red color. This color could be removed from the hair at any time by treatment with 5% Na<sub>2</sub>SO<sub>3</sub> solution (pH 5) for 20 min at 40°.

IC ICM A61K007-13

ICS A61K007-135

CC 62-3 (Essential Oils and Cosmetics)

ST hair direct dye enamine aldehyde; decolorization hair sulfite; carbonyl compd enamine hair dye

IT Decolorizing agents

(agent for coloring fibers)

IT Aldehydes, biological studies

Carbonyl compounds (organic), biological studies

Enamines

Sulfites

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(agent for coloring fibers)

IT Hair preparations

(dyes; agent for coloring fibers)

IT Alkali metal salts

Alkaline earth salts

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(sulfites; agent for coloring fibers)

IT 58-27-5, 2-Methyl-1,4-naphthoquinone 86-51-1, 2,3-Dimethoxybenzaldehyde 90-02-8, 2-Hydroxybenzaldehyde, biological studies 93-02-7, 2,5-Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-03-3, 2-Thiophenecarboxaldehyde 99-61-6, 3-Nitrobenzaldehyde 100-10-7, 4-Dimethylaminobenzaldehyde 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline 120-14-9, 3,4-Dimethoxybenzaldehyde 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, Vanillin, 123-08-0, 4-Hydroxybenzaldehyde 134-96-3, 3,5-Dimethoxy-4-hydroxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 148-53-8, 2-Hydroxy-3-methoxybenzaldehyde 458-36-6, 4-Hydroxy-3-methoxycinnamaldehyde 487-70-7, 2,4,6-Trihydroxybenzaldehyde 487-89-8, Indole-3-carboxaldehyde 498-62-4, 3-Thiophenecarboxaldehyde 552-89-6, 2-Nitrobenzaldehyde 555-16-8, biological studies 613-45-6, 2,4-Dimethoxybenzaldehyde 619-66-9, 4-Carboxybenzaldehyde 620-02-0, 5-Methylfurfural 621-59-0, Isovanillin 623-27-8, Benzene-1,4-dicarboxaldehyde 643-79-8, 1,2-Benzenedicarboxaldehyde 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6, 2,5-Thiophenedicarboxaldehyde 1003-29-8, Pyrrol-2-aldehyde 1192-58-1, N-Methylpyrrol-2-aldehyde 1194-98-5, 2,5-Dihydroxybenzaldehyde 1971-81-9, 4-Dimethylamino-1-naphthaldehyde 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 2233-18-3, 3,5-Dimethyl-4-hydroxybenzaldehyde 2611-99-6 4771-49-7, 6-Methylindole-3-carboxaldehyde 5392-12-1, 2-Methoxy-1-naphthaldehyde 5418-63-3 6203-18-5 6872-17-9, 5-Chloro-2-methylene-1,3,3-trimethylindoline 7311-34-4, 3,5-Dimethoxybenzaldehyde 7570-45-8 7757-83-7, Sodium

sulfite 7770-45-8, 4-Hydroxy-1-naphthaldehyde 10031-82-0,  
 4-Ethoxybenzaldehyde 10196-04-0, Ammonium sulfite 13677-79-7,  
 3,4,5-Trihydroxybenzaldehyde 15971-29-6, 4-Methoxy-1-naphthaldehyde  
 17422-74-1, Chromone-3-carboxaldehyde 17754-90-4, 4-Diethylamino-2-  
 hydroxybenzaldehyde 18278-34-7, 4-Hydroxy-2-methoxybenzaldehyde  
 21635-75-6 21654-46-6 25082-84-2, 3-Ethyl-2-methylenebenzothiazoline  
 29865-90-5, 3,4-Dimethoxy-5-hydroxybenzaldehyde 42059-81-4 62439-66-1  
 62473-58-9 68282-53-1, 4-Methyl-5-imidazolecarboxaldehyde 84562-48-1,  
 4-Dimethylamino-2-methoxybenzaldehyde 90134-10-4, 4-  
 Dibutylaminobenzaldehyde 100980-82-3 101297-27-2 106001-58-5,  
 4-Diethylamino-3-methoxybenzaldehyde 116209-27-9 125187-46-4  
 134822-76-7 145306-30-5 187030-52-0 274696-30-9 274696-31-0  
 274696-32-1 274696-33-2 274696-35-4 274696-36-5 274696-37-6  
 274696-38-7 274904-86-8 274904-87-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(agent for coloring fibers)

IT 932-41-2, 2,3-Thiophenedicarboxaldehyde 932-95-6,

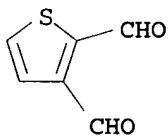
2,5-Thiophenedicarboxaldehyde

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(agent for coloring fibers)

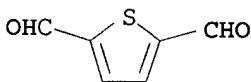
RN 932-41-2 HCPLUS

CN 2,3-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 932-95-6 HCPLUS

CN 2,5-Thiophenedicarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



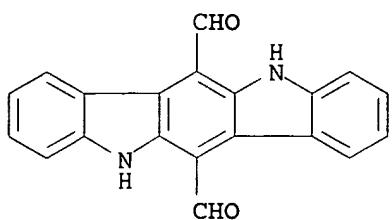
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 9 OF 9 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 1998:205965 HCPLUS  
 DN 129:13264  
 TI Rapid and transient induction of CYP1A1 gene expression in human cells by  
 the tryptophan photoproduct 6-formylindolo[3,2-b]carbazole  
 AU Wei, Yu-Dan; Helleberg, Hans; Rannug, Ulf; Rannug, Agneta  
 CS Department of Genetic and Cellular Toxicology, Stockholm University,  
 Stockholm, S-106 91, Swed.  
 SO Chemico-Biological Interactions (1998), 110(1,2), 39-55  
 CODEN: CBINA8; ISSN: 0009-2797  
 PB Elsevier Science Ireland Ltd.  
 DT Journal  
 LA English  
 AB Studies to assess the induction of CYP1A1 gene expression by tryptophan  
 derived oxidation products which are suggested as endogenous ligands for the

Ah receptor are described. For the two high affinity Ah receptor ligands produced from tryptophan, the chemical structure was recently identified as 6-formylindolo[3,2-b]carbazole (FICZ) and 6,12-diformylindolo[3,2-b]carbazole (dFICZ), resp. Therefore these two compds. show a close similarity to the indolecarbinol-derived condensation product indolo[3,2-b]carbazole (ICZ). Incubation of cells from a human keratinocyte (HaCaT) cell line together with ICZ, FICZ, dFICZ and some structurally related indole compds. was performed. The compound with the highest affinity to the Ah receptor, FICZ, was found to be the most efficient inducer of CYP1A1 gene expression in short time incubation (0.5 h) expts. With longer incubation times (24 h) ICZ was the most efficient inducer. The two most active compds., FICZ and ICZ, caused increased mRNA levels already at a concentration of 100 pM. FICZ was also shown to increase CYP1A1 mRNA levels in fresh human peripheral blood cells at the same low concentration. FICZ and ICZ were furthermore compared with regard to their capacity to inhibit cDNA-expressed human CYP1A1 enzyme and FICZ was found to be the most potent inhibitor. The inhibition was, however, transient in character indicating that FICZ is also an exceptionally good substrate for the CYP1A1 enzyme. The results showing the potent and transient effect of these formylindolocarbazoles, thus emphasize their important properties as signal substances in the Ah receptor pathway. This makes the most potent compound, FICZ, a good candidate for the endogenous ligand of the Ah receptor necessary for normal development and for the basal expression of Ah receptor-dependent genes.

CC 4-3 (Toxicology)  
 ST CYP1A1 gene tryptophan photoproduct formylindolocarbazole  
 IT Gene, animal  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
     (CYP1A1; rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 IT Skin  
     (keratinocyte; rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 IT Microsome  
     Mononuclear cell (leukocyte)  
     (rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 IT Aromatic hydrocarbon receptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
     (rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole in relation to Ah receptors)  
 IT 73-22-3D, Tryptophan, photoproducts 241-55-4, Indolo[3,2-b]carbazole  
 172922-90-6 172922-91-7  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
     (rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 IT 59793-97-4, 7-Ethoxyresorufin-O-deethylase  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
     (rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 IT 172922-90-6  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
     (rapid and transient induction of CYP1A1 gene expression in human cells by tryptophan photoproduct formylindolocarbazole)  
 RN 172922-90-6 HCPLUS  
 CN Indolo[3,2-b]carbazole-6,12-dicarboxaldehyde, 5,11-dihydro- (9CI) (CA

INDEX NAME)



RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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